

CLAIMS

1. A computer implemented method, comprising:

generating an electronic document in a workflow system, the electronic document having content, the electronic document further having a document appearance, the appearance representing the content;

generating one or more control codes for the electronic document as part of a workflow in the workflow system, the one or more control codes being usable to validate the content; and

creating a print out, the print out including the document appearance, and the one or more control codes.

2. The method of claim 1, further comprising:

if the electronic document has an associated approval code, generating a human-readable approval mark for the approval code as part of a workflow in the workflow system;

generating a control code for the approval mark, the control code being usable to validate the approval mark; and

including the control code for the approval mark in the print out.

3. The method of claim 2, wherein generating the approval mark comprises:

generating a digital signature as the approval code; and

generating a signature image associated with the approval code.

4. The method of claim 1, wherein generating one or more control codes comprises:

generating a single control code for the print out.

5. The method of claim 1, wherein the print out has one or more physical pages and generating the one or more control codes comprises:

generating one or more control codes, each control code corresponding to a page of the one or more physical pages.

6. The method of claim 1, wherein generating the one or more control codes comprises:

converting the electronic document to a canonical form; and

generating the one or more control codes by encrypting the canonical form with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key.

7. The method of claim 1, further comprising:

receiving the print out at the workflow system, the print out having a subsequently added human signature; and

validating the received print out within the workflow system.

8. A computer program product, tangibly embodied in an information carrier, comprising instructions operable to cause a programmable processor to:

receive a print out of an electronic document generated in a workflow system, the print out having a document appearance, and having one or more control codes;

convert the print out to a canonical form; and

access a portal of the workflow system to validate the print out using the canonical form and the control codes.

9. The computer program product of claim 8, further comprising instructions operable to cause a programmable processor to:

receive a control code for an approval mark, and

access the portal of the workflow system to validate the approval mark.

10. A workflow system comprising:

means for generating an electronic document having a content and a document appearance;

5 means for generating one or more control codes, the one or more control codes being usable to validate the content;

means for printing a print out, the print out including the document appearance, and the one or more control codes; and

a portal for validating the print out, the validation being performed using a canonical form generated from the print out and using the control codes.

10 11. A computer program product, tangibly embodied in an information carrier, comprising instructions operable to cause a programmable processor to:

generate an electronic document in a workflow system, the electronic document having content, the electronic document further having a document appearance, the appearance representing the content;

15 generate one or more control codes for the electronic document as part of a workflow in the workflow system, the one or more control codes being usable to validate the content; and

create a print out, the print out including the document appearance, and the one or more control codes.

20 12. The computer program product of claim 11, further comprising instructions operable to cause a programmable processor to:

if the electronic document has an associated approval code, generate a human-readable approval mark for the approval code as part of a workflow in the workflow system;

25 generate a control code for the approval mark, the control code being usable to validate the approval mark; and

include the control code for the approval mark in the print out.

13. The computer program product of claim 12, wherein the instructions to generate the approval code cause the data processing equipment to:

generate a digital signature as the approval code; and
generate a signature image associated with the approval code.

5 14. The computer program product of claim 11, wherein the instructions to generate the one or more control codes cause the data processing equipment to:

generate a single control code for the print out.

15. The computer program product of claim 11, wherein the print out has one or more physical pages, and the instructions to generate the one or more control codes cause the data
10 processing equipment to:

generate one or more control codes, each control code corresponding to a page of the one or more physical pages.

16. The computer program product of claim 11, wherein the instructions to generate the one or more control codes cause the data processing equipment to:

15 convert the electronic document to a canonical form; and
generate the one or more control codes by encrypting the canonical form with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key.

17. The computer program product of claim 11, further comprising instructions operable to
20 cause a programmable processor to:

receive the print out at the workflow system, the print out having a subsequently added human signature; and

validate the received print out within the workflow system.